OBD II Functional Test

The Smog Check OBDII functional test consists of an automated process that interfaces with the on-board systems to evaluate and report the status and/or results of the readiness indicators, system faults and malfunction indicator light (MIL). The process is an integral part of the Smog Check inspection requiring minimal technician input. Like the other functional tests, licensed technicians must follow the analyzer prompts when conducting the OBDII inspection.

Vehicle application:

- All 1996 and newer light duty vehicles (8500 GVWR and less) equipped with OBDII are required to undergo the OBDII functional test. Refer to the underhood ECS label to determine whether or not the vehicle is OBDII equipped.

  A very small number of vehicles may be incompatible with the OBDII functional test. In these cases, BAR may (via VID interface) disable the OBDII prompts allowing the completion of the Smog Check inspection. BAR may also provide special test instructions through ET blasts, Smog Check Advisories or the Smog Check web site. BAR continuously works with the equipment and vehicle manufacturers to resolve possible incompatibilities.

  Note: BAR intends to test OBDII equipped heavy-duty vehicles (over 8500 GVWR) in the future. Refer to the Smog Check web site and watch for ET blasts providing instructions.

Inspection:

The OBDII test is an automated function of the BAR-97 analyzer. Once the software is installed, follow the test prompts to determine applicability and to connect the diagnostic link connector (DLC).

- The BAR-97 displays the following prompt on all 1994 and newer light duty vehicles: **"IS THIS VEHICLE SUPPOSED TO GET AN OBDII FUNCTIONAL TEST? (YES/NO) ".** For 1994 and 1995 vehicles, enter "NO" and proceed with the Smog Check inspection. For all 1996 and newer light duty vehicles, technicians must determine whether or not it is equipped with OBDII. Refer to the underhood ECS label. If yes, enter "YES" and follow the analyzer test prompts. The BAR-97 will instruct you to connect the analyzer test lead to the vehicle's diagnostic link connector (DLC). The electronic interface/scan will automatically occur. If no, enter "NO" and proceed with the inspection as prompted.

- Most DLCs are located on the dash board between the driver's side of the instrument panel and the middle of the passenger side. Some manufacturers, however, chose other locations. If you are unable to find the DLC, refer to the appropriate electronic component location manual or emission control diagnostic and repair manual.

Notes: BAR plans to provide DLC location information to Smog Check stations in the near future. The DLC provides an RPM signal that can be used during the Smog Check emissions test sequences.

Test Parameters:

The OBDII functional test Pass/Fail determination is automatically performed by the BAR-97 analyzer. The analyzer assesses the system's ability to communicate, the readiness of system monitors, diagnostic trouble codes, and the MIL command status. BAR may require any number monitors to be set and (via VID interface) may tailor the requirement universally or by vehicle application.

OBDII Pass/Fail Criteria

Communication: The BAR-97 uses standardized OBDII communication protocols. System and DLC tampers or defects may prohibit communication. A few vehicles or systems differ from the standard, which may prohibit communication. Check ET blasts, Smog Check Advisories and BAR web site for specific test instructions for these vehicles. Always follow the analyzer prompts and ensure the analyzer test link is securely connected.	**Pass:** Successful communication established. **Fail:** No communication.
Monitor Readiness Status: The BAR-97 only evaluates monitors supported by the vehicle. BAR may require any number of set monitors and may tailor the requirement universally or by vehicle application.	**Pass:** All required readiness codes are set. **Fail:** More unset readiness (not ready) codes/indicators than allowed.
Diagnostic Trouble Codes & MIL Status: The BAR-97 analyzer gathers data on all DTCs but will only fail the vehicle if a DTC is present and the MIL is commanded on. When a failure occurs, the BAR-97 will print the associated generic DTCs on the VIR. Some, but not all, manufacturer codes may be printed.	**Pass:** No DTC present with MIL commanded off, or DTCs present (pending codes) with MIL commanded off. **Fail:** DTC present and MIL is commanded on.

OBDII Repair & Retest

OBDII repairs must be completed in accordance with vehicle manufacturer's recommended procedures and/or industry-standard procedures published by nationally recognized repair information providers. This includes procedures for recording freeze frame data, clearing codes and verifying repairs.

Smog Check OBD II Functional Test Procedures (12/28/01)